Creating Creative Classrooms

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> *My contention is that creativity now is as important in education as literacy, and we should treat it with the same status.* (Robinson, 2006)

This bold assertion from Sir Ken Robinson, a leading expert and speaker on creativity, is perhaps even truer now than it was six years ago. Literacy (and numeracy) have always been, and should remain, fundamental to education. However, creativity is not a rival to literacy or numeracy education; it is not an addition to these (or any other) areas of the curriculum. Creativity should be a core, integrated element of teaching and learning throughout the curriculum and the school environment. In the new national curriculum, "critical and creative thinking" are highlighted as general capabilities "that can be developed and applied across the curriculum" (ACARA, 2011, p. 15). Moreover, an aim of education noted by the 2008 Melbourne Declaration on Educational Goals for Young Australians is "to support all young Australians to become ... confident and creative individuals" (MCEETYA, 2008, p. 8). These are confirmation that creativity should have high "status" in Australian education.

The importance of creativity and fostering students' creative growth can be categorised into three main focus areas:

- individuals – creativity can enhance individuals' learning, ability to manage changes and challenges, personal expression, self-actualisation, and preparation for an unknown future where some jobs will become automated by technological developments and many jobs our current students will hold do not yet exist;
- society – creativity is needed to find solutions to many social, health, environmental, and political problems, etc., affecting our society; and
- the economy – creativity and innovation are key economic drivers of the 21st century, e.g., the surge in state-of-the-art health research centres and growth in the Creative Industries.

While there has been much rhetoric about the importance of creativity, we must go beyond this to concrete action and changes in pedagogy within schools. This article will discuss the

nature of creativity and how it can be supported or inhibited in the school context. In addition to the broader literature, I will include findings from my research conducted over two years with high school students identified as creative in various domains (see Lassig, 2012).

Defining Creativity

Creativity is about producing an idea, product, performance, or way of doing something that is both novel and appropriate. Novelty is not sufficient creativity; it simply refers to something new. Creativity comprises an outcome that is new and also appropriate to the task, useful, meaningful, or valuable in some way (Plucker, Beghetto, & Dow, 2004). Whether or not something can be defined as creative will depend on the level of creativity, its context, and who is judging creativity. Creativity might be seen as a continuum from low to high levels of creativity (see Figure 1).

Intrapersonal or *mini-c* creativity can be achieved by anyone because the judge of creativity is oneself (Beghetto & Kaufman, 2007). Mini-c is similar to the concept of *personal creativity* (Runco, 2007) and *Psychological Creativity* (*P-Creativity)*, which refers to ideas that are original in an individual's mind, even if others have also thought of the ideas (Boden, 2004). It is particularly relevant to the creativity of young people and in the school environment. Examples of mini-c creativity by students include: connections made to develop new understandings of related scientific concepts; solving mathematical problems using their own methods instead of a learned formula; and experimenting with haiku poetry. Everyday or *little-c* creativity refers to producing a novel outcome that is appropriate to other people in a particular social context (Beghetto & Kaufman, 2007; Craft, 2001, 2005; Kaufman & Sternberg, 2007). Little-c is for the purpose of engaging in and managing everyday life activities or interests. For example, a student's hobby of painting whose work is thought creative by family and friends, and improvisations by a local jazz band judged creative by the local community, could be classed as little-c creativity. In my research with school students, I found there was another type of creativity at a similar level but which had very different motivations, constraints and contexts. This type of creativity, which I have coined *ed-c* or educational creativity, is about developing outcomes that are novel and useful for the purpose of learning or achievement in formal educational environments (e.g., schools, universities). Little-c can also include learning; however, unique to ed-c is that students' creative processes and products are developed within the external constraints of the educational system, including limitations posed by curricula, task demands, assessment criteria, or teachers'

instructions. At school, the judges of creativity are usually teachers or fellow students in peer-assessed tasks. The two higher levels of creativity on the continuum in Figure 1 are less likely to be achieved by school students. Professional or *Pro-c* creativity is demonstrated by people with high levels of expertise who have made a significant creative achievement in their particular field (e.g., Victor Chang's contributions to cardiology) (Kaufman & Beghetto, 2009), while eminent or *Big-C* is the rare, unquestionable creativity throughout history (e.g., Shakespeare, Mozart, and Einstein) (Beghetto & Kaufman, 2007; Craft, 2001; Csikszentmihalyi, 1996).

Creativity in Education

Classroom Conditions Supporting Creativity

The school and classroom environment is an important consideration for encouraging and enhancing student creativity. It is generally agreed that schools can positively influence creative development when learning is more authentic, learner-centred, and goes beyond a focus on reproduction of knowledge to students developing their own knowledge and strategies for engaging in creative challenges (Beghetto & Plucker, 2006).

Through my research of students' perspectives of supportive environments for their creativity, the following environmental conditions emerged as most important:

- opportunities for creativity, including teachers providing sufficient time for creative ideation, incubation and production, as well as designing tasks that value creativity;
- a balance between student autonomy (intellectual, task and environmental freedom) and structure (providing a starting point or boundaries to work within);
- high expectations and challenge afforded by intellectual rigour, complexity and higher order thinking, rather than trivial 'creative activities' with no depth or authenticity;
- exposure to diverse stimuli, such as new ideas, people, places, and experiences;
- allowing students to find a physical environment that supports (or, at least, does not hinder) them to get into the creative 'flow';
- being a part of network with 'creative like minds' who share their level of and passion for creativity;
- access to experts to model creativity, including industry leaders, mentors, and teachers with real-life experience in a particular field;

- cognitive support for creativity, for example, through teaching creatively, encouraging creative learning, being open to creative ideas and providing creativity-specific feedback, and increasing the breadth and depth of knowledge and skills that students can apply to creative tasks; and
- affective support through accepting, valuing, encouraging, and recognising creativity; having high expectations of students' creative capacity; and encouraging intrinsic motivation for creativity by incorporating students' passions into their learning (Lassig, 2012).

Many of these supportive school environment conditions for creativity identified by students have similarly been found in others' research of creativity in education (e.g., Craft, 2000, 2005, 2011; Cropley, 1997; Lucas, 2001; Nickerson, 1999; Sternberg & Williams, 1996; Torrance, 1981).

Shining a Spotlight on Creative Self-Efficacy

Another aspect of supporting creative growth, about which there has been limited research thus far, is the importance of fostering creative self-efficacy. Based on Bandura's (1997) social cognitive theory, creative self-efficacy refers to individuals' judgments about their own ability to be creative. This relatively recent construct was developed and validated by Tierney and Farmer (2002, 2004). Creative self-efficacy is now recognised as instrumental in developing and demonstrating creativity. Creative self-efficacy contributes positively to creative engagement and performance, and how students are affected by perceived creative successes and failures. Two key issues relating to schools I have found are that creative self-efficacy can substantially differ between students in the arts and those in science or mathematics domains, and that creative self-efficacy beliefs can be enhanced by environmental influences (Lassig, 2012).

First, students in my research who were interested and talented in the arts generally had higher levels of creative self-efficacy overall, and were confident about their creativity across a greater range of domains than students whose interests and talents lay in science and mathematics domains. One potential explanation relates to the implicit beliefs held by many that the arts are, by nature, automatically creative. However, 'artistic' and 'creative' should not be used as synonyms; one can be artistic without being creative and visa versa. A student who replicates Vincent Van Gogh's paintings is artistic because they demonstrate high levels of technical ability; however, they are not being creative because there is no novelty. I spoke

to many students focused on science and mathematics who, although they could recount numerous examples of creativity outside the arts (e.g., in medicine, engineering, and IT), still believed that they were not as creative as arts students. Another potential explanation revealed by these students was that a culture of creativity is often explicitly promoted in the arts, whereas more factual and analytical learning was reinforced in science and mathematics subjects. Thus, there is evidence to suggest that students' creative self-efficacy was influenced by their own and others' beliefs about creativity.

A second key finding relates to how the environment influences creative self-efficacy. Bandura's (1997) self-efficacy theory explains that judgements about our ability are influenced by three sources: social persuasion, mastery experiences, and vicarious experiences. In my research, all students were persuaded to some degree of their creativity by being nominated as creative to be selected for the study. The arts students had generally already been told they were creative. For the science, mathematics and technology students, their nomination and selection for the study challenged aforementioned assumptions of being less creative than arts students. The study also provided students with the opportunity to discuss their conceptions of creativity and develop a more comprehensive understanding of creativity in a range of areas. Most students had never consciously reflected on their creativity prior to the study. Therefore, after discussing creativity, they could identify examples of their own creative experiences and outcomes (i.e., examples of Bandura's mastery experiences) and their peers' successful creativity (i.e., vicarious experiences).

These findings have important implications for the school environment and the influence it can have on students' creative self-efficacy. One way in which schools can enhance creative self-efficacy is to identify and refute any mistaken implicit beliefs about creativity through explicit discussions among teachers and students about the meaning of words such as 'creative', 'artistic', 'scientific', and so forth, and to offer examples and role models of creativity in all curriculum areas. Schools can also assist by providing sufficient opportunities, time, and support for students to experience creative success. The effectiveness of these strategies is likely to be enhanced by opportunities to reflect on and think metacognitively about their creative processes and strategies. Resulting increases in creative self-efficacy might further improve creative ability by creating a self-fulfilling prophecy.

Classroom Conditions Inhibiting Creativity

There are a range of differing views on whether particular conditions inhibit rather than support creativity. For example, Sternberg and Lubart (1995) presented some common opposing views about the impact of the environment on creativity including nurturing versus harsh environments, freedom versus limits, and whether or not creativity is inhibited or supported by competition, cooperation, and role models. A conclusion to be drawn from such examples is that it is often a balance of conditions rather than an 'either/or' argument.

From a student perspective, a number of environmental conditions were identified as typically inhibiting creativity. The main inhibitors of student creativity were:

- curriculum constraints from strict and inflexible lessons, curriculum and assessments that do not value creativity;
- lack of time for creative pursuits due to other class work or assignment demands, and lack of sufficient time during the creative process for ideation, incubation, and production;
- pressure from school or extra-curricular activity workloads (particularly for high school students), the pressure of trying to create in stressful situations, and social pressure to conform to conventional ways of thinking and acting;
- distractions in the physical and social environment;
- lack of resources for creativity, including lack of access to environments or materials, lack of social supports, and lack of stimuli; and
- negative social interactions with people who do not support or respect students' creativity, and who only offer negative judgment and criticism (without constructive feedback), as well as group work where not all students are involved or invested in the task and where other elements of negative social interactions arise.

There is still a limited body of empirical studies about how creativity is supported or inhibited in the school environment (Hennessey & Amabile, 2010), and the findings from students' perspectives presented throughout this article offer new insights.

Conclusion

In reflecting on how we might think about fostering creativity in education, there are three interrelated constructs: *creative teaching*, *teaching for creativity*, and *creative learning*. *Creative teaching* refers to teachers using imaginative and innovative styles of teaching to make learning more interesting and open-ended, and valuing creativity in their own and their students' work (e.g., Jeffrey & Craft, 2004; National Advisory Committee on Creative and

Cultural Education [NACCCE], 1999). This differs from *teaching for creativity*, which involves teachers using pedagogies that support and develop young people's imagination and creativity (e.g., Jeffrey & Craft, 2004; NACCCE, 1999), such as open-ended tasks that encourage more than one 'solution', linking to students' passions, and stimulating student curiosity through complex, authentic tasks. In addition to providing pedagogical support for student creativity, teaching for creativity should also include teaching *about* creativity, as this has implications for students' (and teachers') creative self-awareness and self-efficacy, and for supporting metacognitive thinking about creative processes and experiences. *Creative learning* lacks a consistent definition. I interpret as students having autonomy and ownership of their learning, enabling them to develop and use their imagination and experience to think and learn in ways that are novel and meaningful to them (and perhaps, but not necessarily, to others). This interpretation aligns with other definitions that focus on the creative process of learning (e.g., Craft, 2005; Jeffrey & Craft, 2004).

From empirical research, we can build a shared, well-founded understanding of creativity and how schools can foster creative growth, which can inform school policies and teacher training (see Lassig, 2009). The school culture plays a significant role in young people's creative development; a responsibility that cannot afford to be underestimated. Today's students are tomorrow's leaders. We do not expect all young people to achieve *Pro-c* or *Big-C* creativity in the future; however, fostering the *mini-c*, *little-c* and *ed-c* of students has significant benefits for them as individuals now and in the future, and potentially for society and the economy. It is time to go beyond talking about creativity as a 'buzzword' and something that is restricted to the arts. My belief is that educational leaders can inspire creative classrooms by ensuring teachers are informed and trained to understand their own and their students' creativity, and can effectively integrate creativity throughout the curriculum.

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